# Health Advisory:

## Influenza Antiviral Use for Persons at High Risk for Influenza Complications or Who Have Severe Influenza Illness

**March 3, 2008**

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**Health Advisory**
**March 3, 2008**

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**DIRECTOR**

**SUBJECT:** **Influenza Antiviral Use for Persons at High Risk for Influenza Complications or Who Have Severe Influenza Illness**

The following information is from a Centers for Disease Control and Prevention (CDC) Health Advisory issued February 29, 2008.

*CDC is alerting clinicians to be fully aware of the potential benefits of influenza antiviral medications during this influenza season.*

**Summary:**

Recent surveillance data indicate that many communities are reporting substantially increased influenza activity. **This CDC Health Advisory is intended to re-emphasize the importance of considering antiviral medications for use in the treatment or prevention of influenza. The two prescription antiviral medications recommended for treatment or prevention of influenza include oseltamivir (Tamiflu®, Roche Laboratories, Nutley, NJ) or zanamivir (Relenza®, GlaxoSmithKline, Research Triangle Park, NC). These antiviral medications are also known as neuraminidase inhibitors.** Recent studies suggest a considerable protective effect against complications associated with influenza when neuraminidase inhibitors are used for treatment. These benefits include reducing the risk of death among older adults hospitalized with laboratory-confirmed influenza. Because high levels of resistance to adamantane antiviral medications (rimantadine and amantadine) continue to be observed among circulating influenza A viruses, adamantanes are not recommended for treatment or prevention of influenza.

**Background:**

During this influenza season, a small increase in the number of influenza viruses resistant to oseltamivir has been observed in the United States. Among the 471 influenza A and B viruses tested during the 2007–08 influenza season to date, 27 (5.7%) have been found to be resistant to oseltamivir, compared with 0.7% during the 2006-07 season. All of the oseltamivir-resistant viruses have been influenza A viruses of the H1N1 subtype; 8.7% of the 310 H1N1 viruses tested are resistant to oseltamivir. No resistance to oseltamivir has been observed among the 161 influenza A (H3N2) and influenza B viruses tested to date, and no antiviral resistance to zanamivir has been detected in any subtype.

**Recommendations:**

Given the low level of overall resistance to oseltamivir among circulating influenza viruses, the finding of resistance only in influenza A (H1N1) viruses, and no resistance to zanamivir, **neuraminidase inhibitor medications continue to be recommended for the treatment and chemoprophylaxis of influenza**. Antiviral treatment should begin within 48 hours of symptom onset if possible, but treatment should still be considered for persons who present more than 48 hours after illness onset if they have severe influenza illness or are at higher risk for severe complications from influenza.

**Oseltamivir is approved for treatment and prevention of influenza for persons 1 year and older, while zanamivir is approved for treatment of persons 7 years and older and prevention of influenza in persons 5 years and older.** Enhanced surveillance for detection of oseltamivir-resistant influenza viruses is ongoing, and antiviral usage recommendations will be revised to account for changes in antiviral resistance trends as needed. Influenza A viral isolates from affected persons in institutional outbreaks should be subtyped. Health care providers should contact their local or state public health department for assistance when an outbreak of influenza in an institutional setting (e.g., a long-term care facility) occurs. State health departments should consult with CDC about the need for antiviral resistance testing when influenza A (H1N1) viral isolates are obtained from outbreaks in institutional settings.

In some communities, circulating influenza virus strains during this influenza season are antigenically different from those contained in current influenza vaccines. Preliminary results from a rapid assessment of vaccine effectiveness suggest that currently available influenza vaccines provide some protection against influenza virus infection requiring medical care. However, the level of protection is likely to be lower than what is observed in seasons in which the vaccine strains are closely matched to circulating influenza virus strains. When influenza vaccine effectiveness is reduced, clinicians should be aware of the potential for appropriately vaccinated persons to develop influenza despite vaccination.

Because approximately 2 weeks is required to develop an optimal immune response to influenza vaccination, use of neuraminidase inhibitors for prevention of influenza during a confirmed influenza institutional outbreak should be considered for persons at higher risk for influenza complications and who were vaccinated within the previous 2 weeks. Persons who were vaccinated more than two weeks before a suspected influenza virus exposure, but who are less likely to develop protective immunity after vaccination (e.g., persons in long-term care facilities or persons with immunosuppression), can be considered for antiviral chemoprophylaxis when local influenza surveillance data indicate that influenza activity is high.

Clinicians should consider whether to recommend influenza antiviral treatment based on the severity of the patient's illness, the time since illness onset, local influenza surveillance data and influenza test results. Rapid diagnostic tests for influenza have good specificity, but are only moderately sensitive. Positive rapid tests are generally reliable when influenza activity is high in a community and are useful in deciding whether to initiate antiviral treatment. Negative rapid test results are less helpful in making treatment decisions. When local influenza activity is high, persons with severe respiratory symptoms or persons with acute respiratory illness who are at higher risk for influenza complications should still be considered for influenza antiviral treatment despite a negative rapid influenza test unless illness can be attributed to another cause. As reported in a previous HAN, persons with severe influenza illness should also be assessed for invasive bacterial co-infection, and appropriate antimicrobial therapy directed at potential bacterial pathogens, such as methicillin-resistant *Staphylococcus aureus,* might be necessary.

To reduce the substantial burden of influenza in the U.S., **CDC continues to recommend a three-pronged approach: influenza vaccination, use of neuraminidase inhibitor antiviral medications when indicated for treatment or prevention, and use of other measures to decrease the spread of influenza, including promotion of hand hygiene, respiratory hygiene, cough etiquette, and staying home from work and school when ill**. Clinicians in communities experiencing increased influenza activity should consider prescribing the neuraminidase inhibitor antiviral medications oseltamivir and zanamivir for the treatment of influenza patients or for prevention of influenza when indicated for institutional influenza outbreaks or for persons at high risk for complications from influenza who have contraindications to influenza vaccination.

**For more information, please see the CDC website:**
http://www.cdc.gov/flu/professionals/antivirals/.

Questions should be directed to the Missouri Department of Health and Senior Services' Bureau of Communicable Disease Control and Prevention at 573/751-6113, 866/628-9891, or 800-392-0272.